

**VETERINARY TEACHING HOSPITAL  
WESTERN COLLEGE OF VETERINARY MEDICINE**

**HYPERTHYROID CAT TREATMENT  
INFORMATION FOR REFERRING VETERINARIANS  
(revised August, 2005)**

This information is intended for veterinarians with questions regarding the referral of hyperthyroid cats for treatment with radioactive iodine (131I). There is also a client information handout that can be viewed answering some of the frequently asked questions about this treatment. [LINK](#)

**COST:**

To get a quote for the approximate cost of treatment, without complications, contact our Small Animal Clinic receptionists (306-966-7126). If the cat has other concurrent problems (such as diabetes or heart failure) which require intensive therapy, the bill will be higher. Courier charges to and from the airport are not included in the quote. We ask clients to give us a credit card number (VISA or MASTERCARD) or a deposit by cheque (\$700.00) at the time their cat is admitted. We bill them for the remaining charges at the time of hospital discharge. We do not offer in-house credit arrangements or payment plans.

**ANTITHYROID DRUGS**

Studies show that Methimazole (Tapazole) administration does not interfere with radioactive iodine treatment. If you feel that a cat would benefit from treatment with antithyroid medication prior to referral for radioactive iodine treatment that is not a problem. We will discontinue the antithyroid medication when the cat is admitted to this hospital (usually 3 to 4 days prior to the actual radioactive iodine treatment)..

**WHAT IS DONE HERE?**

All hyperthyroid cats that come to the WCVM will have the following diagnostic tests performed:

*Physical Examination*  
*Complete blood count (CBC)*  
*Serum biochemistry profile*  
*Resting T4*  
*Electrocardiogram (ECG)*  
*Chest radiographs*  
*Blood pressure*

Other studies (cardiac ultrasound, urine culture, abdominal ultrasound) may be performed at the discretion of the attending clinician if considered warranted based upon the history, physical findings or the results of the initial testing

## **WHO CARES FOR THE CAT**

The cat is admitted to the hospital as a Medical case, and will be under the care of a Small Animal Medicine clinician. The cat will be examined and the appropriate diagnostic testing performed to make certain that the cat is a good candidate for radioactive iodine therapy. If the cat is a suitable candidate for this therapy, then the radioactive iodine dose will be administered subcutaneously and the cat will be moved to our special ward for radioactive hyperthyroid cats.

While in the Radioactive Hyperthyroid Cat Ward the cat will be under the direct care of two hired veterinary students who look after all of the cat's needs. The cats are cleaned, watered and fed twice a day and medications are administered as required. The students also find time to groom and pet the cats who appreciate this kind of attention. The student notifies the clinician in charge of the ward immediately if there are any medical problems with any of the cats. The students also call the owners at least once a week to let them know how their cats are doing after treatment. If there are problems with a cat while it is at the WCVM, the owners are notified immediately by the clinician in charge.

Most hyperthyroid cats are older (average age 12 years) and owners are concerned that they won't do well during their period of hospitalization. We have treated approximately 450 cats over the past years and our experience is that these cats do very well in our hospital. That being said, it is very important to us that these cats eat while they are in our hospital. We encourage owners to send along a special or favorite diet if their cat is very nervous or is a picky eater. If we cannot convince a cat to eat in the days preceding the planned treatment we will not treat it and we will send it home. This is one reason (*in addition to the pre-treatment testing*) that we request that cats arrive at our hospital 3 or 4 days prior to the planned treatment - we like for the cats to get a chance to acclimatize, relax and start to eat in our hospital.

## **ARRANGING REFERRAL TO THE WCVM**

Cats are treated in "batches" in order to minimize the costs associated with the treatment, care and housing of the cats. We can treat up to 5 cats at a time. The Small Animal Clinic receptionists will be able to give you an estimate of where a cat is on the waiting list and how long it is likely to be before the cat can be accepted for treatment. When you call to place a cat on the waiting list please give all of the patient and client information to the receptionists. We will then call the client directly one or two weeks prior to the scheduled treatment to arrange hospital admission.

## **MEDICAL CONSIDERATIONS**

When the cat is sent to the WCVM for treatment, please forward (with the cat or by FAX: 306-966-7129) a brief summary of the cat's medical history and the results of any recent laboratory tests. This should include an assessment of renal function (urea or BUN, creatinine, urine specific gravity), a serum T4, and the details of any treatment administered.

We will not accept "sick" cats for treatment. Medically unstable cats have a much greater likelihood of complications compared with stable cats. The referring veterinarian must ensure that the cat is fit for travel (if it has to be flown or driven in) and that it can withstand the stress of examination and hospitalization.

Hyperthyroidism and chronic renal failure are both common disorders in older cats. We know that GFR decreases with successful treatment of hyperthyroidism in most cats regardless of the therapy used (medical, surgical, radioactive iodine). In cats with pre-existing renal dysfunction, the deterioration in GFR that accompanied resolution of hyperthyroidism can result in symptomatic renal failure. For this reason we ask that referring veterinarians try to carefully evaluate kidney function in cats before sending them here for radioactive iodine treatment. If there is evidence of pre-existing significant kidney dysfunction we recommend that treatment with a permanent treatment such as radioactive iodine be delayed while medical treatment of the hyperthyroidism is attempted with reversible antithyroid drugs (methimazole) for a few months. If renal function is stable when the cat is maintained at a euthyroid state for 1 to 2 months, then it is a good candidate for radioactive iodine therapy.

## **THE TREATMENT ITSELF**

On the morning of treatment the cat will be moved to our treatment ward. This small ward containing five large cages is in the same building as our Small Animal Clinic but is separate from the clinic. It is a nice, quiet room. The cats are housed individually and have no contact with other cats during their hospitalization. Each cat receives a fixed low dose of radioactive iodine subcutaneously. If we have reason to suspect thyroid carcinoma instead of adenomatous hyperplasia in a cat (lung metastases visible on thoracic radiographs or failure to respond to initial treatment) then we treat with a high dose intended to ablate all thyroid tissue. There is no pain or anxiety associated with the treatment and we have not noticed any side effects in the treated cats

## **LENGTH OF HOSPITAL STAY**

Most cats stay at our College approximately 7 to 14 days. This includes 3 to 4 days before treatment and approximately 10 days after treatment. Radiation safety regulations mandate that we must keep cats until their level of radioactivity reaches an acceptable level. We will use a Geiger counter to measure the amount of radioactivity left within your cat beginning seven days after treatment with radioactive iodine. Once the degree of radioactivity measured over the thyroid gland has diminished to a certain level we know that there is no longer any radioactive iodine being excreted in the urine or saliva so exposure to the cat should pose no risk to humans or other pets. Owners will have radiations safety guidelines to follow for 2 weeks when they take the cat home (wearing gloves to change the litter box, not sleeping with the cat) - if they feel they are unable to follow those guidelines or they feel uneasy with the very low potential for exposure, we are willing to keep the cats for that additional 2 week period (at boarding cost).

## TREATMENT OUTCOME

Greater than 90% of cats treated with radioactive iodine will be cured by a single dose. We ask that you re-evaluate the cat about one month after hospital discharge to confirm that treatment has been successful (measure T4) and to evaluate kidney function – we would like a copy of that result sent to us for our records.

A small percent of cats (<5%) will not respond completely to this treatment. They will feel better and symptoms may disappear, but the thyroid hormone level is still high and these cats will relapse within months. Reasons for failure to respond to the initial treatment may include a very large thyroid mass or the presence of a malignant thyroid tumor instead of a benign one. These cats may be cured by a second treatment of a very high dose of radioactive iodine.

A few cats will become hypothyroid after treatment. These cats for some reason respond more completely to the low dose of iodine than is desirable. This is usually not an important clinical problem and does not result in any symptoms. Occasionally, however, there will be clinical signs such as weight gain, sluggishness and poor hair coat requiring treatment with thyroid hormone replacement (pills), perhaps forever.